

What is claimed is:

1. A protein or a variant thereof, which has a binding activity to an insulin receptor-related receptor and the following characteristics:

(a) it has the amino acid sequence of SEQ ID NO: 1;

(b) it has a molecular weight of about 6135, 6206, 6250 or 6321 measured by mass spectrometry using the Fourier transformation ion cyclotron method.

2. The protein according to claim 1, which has the amino acid sequence of any one of SEQ ID NOS: 3-7.

3. A pharmaceutical composition, which comprises a protein binding to an insulin receptor-related receptor or an agonist or antagonist thereof as an active ingredient.

4. The pharmaceutical composition according to claim 3, wherein the composition has an action of regulating growth/differentiation of a cell which expresses an insulin receptor-related receptor.

5. The pharmaceutical composition according to claim 4, wherein the cell is a cell related in diabetes, neuropathy, renal disorder or gastrointestinal injury.

6. The pharmaceutical composition according to claim 5, wherein the cell is a pancreatic β cell.

7. The pharmaceutical composition according to any one of claims 3-6, wherein the protein binding to an

insulin receptor-related receptor is an epithelin/granulin.

8. The pharmaceutical composition according to claim 7, wherein the epithelin/granulin is a protein
5 which is contained in a culture supernatant of rat glioma cells stimulated with a phorbol ester and concentrated in a fraction eluted with 8-20% acetonitrile from a C18 reverse phase HPLC column.

9. The pharmaceutical composition according to
10 claim 7, wherein the epithelin/granulin has the amino acid sequence of SEQ ID NO: 8.

10. The pharmaceutical composition according to claim 7, wherein the epithelin/granulin is a protein having the amino acid sequence of any one of SEQ ID NOS:
15 3-7 or a variant thereof having a binding activity to the insulin receptor-related receptor.

11. A DNA encoding the protein according to claim 1.

12. The DNA according to claim 11, which encodes
20 an amino acid sequence of any one of SEQ ID NOS: 3-7.

13. A method for searching for an agonist or an antagonist of an insulin receptor-related receptor binding protein, comprising the steps of:

allowing binding of the insulin receptor-related
25 receptor and a protein binding to the receptor in the presence of a test substance, and

measuring inhibition of the binding.

[illegible]